Si Yuan JIN

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EDUCATION

Hong Kong University of Science and Technology

MPhil-PhD of Information Systems, GPA: 3.787   Aug 2022 - Now

- − Supervisor: Prof. Kar Yan Tam
- − Topics: Blockchain, Digital Platform, Information Systems, FinTech, Quantum IT Management
- − Methods: Econometrics, Field Experiment, Survey, Technical Algorithm Design

South China University of Technology

Bachelor of Financial Technology, GPA: 3.83/4.00 (Rank: 1/33)   Sep 2017 - Jul 2021

- − Award/Grant: 2019-2020 China National Scholarship (Top 0.1 - 0.2%), Outstanding Graduates

JOURNAL PUBLICATIONS - Chronological Order

[1] M Zhang, B Zhu, Z Li, **S. Jin**, and Y. Xia. "Relationships among Return and Liquidity of Cryptocurrencies". Forthcoming at *Financial Innovation.*

[2] **S. Jin**, and Y. Xia. "CEV Framework: A Central Bank Digital Currency Evaluation and Verification Framework". *IEEE Access 10 (2022): 63698-63714.*

POLICY PUBLICATIONS - Chronological Order

[1] Joint with HKUST SBM and HSBC Holdings plc (2023). "e-HKD Pilot Programme". Link to the summary cited by the Hong Kong Monetary Authority.

[2] Joint with HSBC Bank (Singapore) Limited and HSBC Holdings plc (2021). "Global CBDC Challenge Report". Link to the report cited by the Monetary Authority of Singapore.

WORKING PAPERS

[1] **S. Jin**, Z Li, A. Huang, and K. Tam. "Token-Based Platforms and Green Dilemma". Available at SSRN. In preparation for submission to *Information System Research.* [UTD 24]

[2] **S. Jin**, Y. Cai, K. Tam. "Operational vs. Algorithmic Transparency: Misinterpretation in Stablecoin Crises". Under review at *32nd European Conference on Information Systems* **(ECIS 2024)**.

[3] **S. Jin**, K. Tam, B. Zeng, Q Shao, Y Huang, Y. Xia, B Zhu, and Z Li. "Classical Principles for Quantum Monte Carlo Analysis". Reject & Resubmit at *INFORMS Journal on Data Science*.

[4] **S. Jin**, B Zhu, Z Li, and Y. Xia. "Decision Making in Cryptocurrency-backed Loans: A Volatility and Liquidity Integrated Approach". Under review at *Decision Support Systems*.

[5] M. Dordal i Carreras., K. Kawaguchi, H. Guo, **S. Jin**. "Consumer Adoption and Perceptions of rCBDC: Insights from the Hypothetical e-HKD Pilot". In preparation for submission to *Economics Letter*.

[6] **S. Jin**, Y. Xia, and B Xu. "A UTXO-Based Sharding Approach with Zero-Knowledge Proof KYC for Regulated Digital Currencies". 2nd round review at *Cluster Computing*.

[7] **S. Jin**, K. Tam, and Q. Shao. "Quantum-inspired Classical Singular Value Thresholding Algorithms". In preparation for submission to *INFORMS Journal on Data Science*.

[8] Y Huang, **S. Jin**, B. Zeng, and Q Shao. "Adaptive Diversity-based Quantum Circuit Architecture Search". Under review at *IEEE Transactions on Quantum Engineering*.

[9] K. E. Novoselov, A. Huang, and **S. Jin**. "Quantum Accounting". Under preparation.

CONFERENCE PUBLICATIONS - Chronological Order

[1] **S. Jin**, Z. Li, B. Chen, B. Zhu, and Y. Xia. "Software Code Quality Measurement: Implications from Metric Distributions". IEEE International Conference on Software Quality, Reliability, and Security, Chiang Mai, Thailand, **(QRS 2023)**.
Short Paper with Oral Presentation, Acceptance Rate: 23.47%

[2] Y. Liu, C. Xu, and **S. Jin**. "Reinforcement Learning for Continuous Control: A Quantum Normalized Advantage Function Approach". IEEE Congress on Services, Chicago, USA, **(SERVICES 2023)**. *Short Paper with Oral Presentation, Average Acceptance Rate: 21.50%*

[3] **S. Jin**, B. Xu, P. Intallura, and Y. Xia. "A UTXO-based Sharding Method for Stablecoin". IEEE International Conference on Blockchain Computing and Applications, San Antonio, USA, **(BCCA 2022)**. *Short Paper with Oral Presentation, Acceptance Rate: <30%*.

INTERNATIONAL PATENT APPLICATIONS

[1] B. Zhu, Z. Li, Y. Xia, Q. Shao, Y. Huang, **S. Jin**. "Adaptive Diversity-Based Quantum Circuit Architecture Search". Application No. 18/519,617. Filed at *U.S. Patent Office*.

[2] **S. Jin**, Y. Huang, Z. Li, B. Zhu, Y. Xia. "Method for Integrating Moment of Squares Relaxations in Variational Quantum Algorithms For Enhanced Optimization". Submitted to *Chinese Patent Office*.

[3] **S. Jin**, Y. Huang, Z. Li, B. Zhu, Y. Xia. "Hybrid computer system for asset selection optimization". Submitted to *Chinese Patent Office*.

[4] B. Zhu, Y. Xia, Z. Li, **S. Jin**. "Network Analysis using optical quantum computing". Application No. PCT/CN2023/070773. Filed at the *Chinese Patent Office*.

[5] **S. Jin**, Y. Xia. "Transaction Security for Multi-tier Transaction Networks". Application No. PCT/CN2022/137317. Filed at the *Chinese Patent Office*.

[6] **S. Jin**, Y. Xia. "A Modular Analysis Method of Consensus Algorithm in Central Bank Digital Currency System". Application No. PCT/CN2022/126708. Filed at the *Chinese Patent Office.*

[7] **S. Jin**, Y. Xia. "Blockchain transaction sharding for improved transaction throughput." Application No. PCT/CN2022/137317. Filed at the *Chinese Patent Office.*

RESEARCH PROJECTS & FUNDING APPLICATIONS

- Empowering Hong Kong Finance with A Quantum Algorithm Platform (**RIF, $10m**)   *Final Round*
  Project Coordinator: Prof. Yingying Li, Prof. Qiming Shao.
- RegTech - Design of CBDC and Digital Assets in Hong Kong (**RGC, $8m**)   *Jul 2023 - Now*
  Project Coordinator: Prof. Kar Yan Tam.

AWARDs / HONORS

• **HKUST** PhD Postgraduate Studentship	*Nov 2022 - now*
• **HKUST** Fintechstic NFT & Metaverse Competition Mentor (Total 10 Mentors)	*Nov 2022*
• **Monetary Authority of Singapore** Global CBDC Challenge Finalist (Top 5% in 50-country submissions)	*Nov 2021*
• **SCUT** University-level excellent graduation thesis (Top 1%)	*Jun 2021*
• **SCUT** China National Scholarship (Top 0.1%-0.2%)	*Dec 2020*
• **SCUT** First-class Scholarship (Top 1%) **Twice**	*2018 & 2019*

TEACHING EXPERIENCE

• **Lab Instructor** "Coding for Business", ISOM 2020 Lab, HKUST	*Sep - Oct 2023*
• **Teaching Assistant** "Coding for Business", ISOM 2020, HKUST	*Feb - Apr 2023*
– Evaluation: 4.3/5.0	
• **Teaching Assistant** "Blockchain Introduction", SCUT	*Feb - May 2021*

ACADEMIC SERVICE / OPEN SOURCE

- **Ad Hoc Reviewer** International Conference on Information Systems (ICIS 2023), Pacific Asia Conference on Information Systems (PACIS 2023), Quantum Information Processing (QIP 2023)
- **Mentor** Data Driven Modeling MSc Program Research Yearly Project   *Oct 2022 - now*
  - 7 M.Sc. Students in Total: 5 continue to conduct research work worldwide
  - Y. Liu received the Best Presentation Award in 2023
- **Open-source Project Initiator** Quantum Finance Literature, CBDC Literature

INVITED TALKS - Chronological Order

[1] "Introduction to Financial Technology", *South China University of Technology*, Guangzhou, China *2023*

[2] "A Central Bank Digital Currency Evaluation and Verification Framework", *Europe Innovation Community of Practice*, HSBC, Europe. *2022*

INDUSTRIAL EXPERIENCE

• **HSBC Hong Kong** *Nov 2022 - Now*
Research Consultant Hong Kong

• **HSBC Laboratory - Ventures, Innovation & Partnerships** *Jul 2020 - Aug 2022*
Quantum Computing & CBDC Research Engineer Guangzhou
  – Award/Grant: 2021 HSBC Top Performer | 2021 HSBC Role Model (Top 5%)

LANGUAGE

• Mandarin (Native)

• English (Proficient, IELTs 7.5)

• Cantonese (Beginner)